



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,068	02/28/2005	Yasuo Ohsawa	Q86524	6620
23373	7590	07/12/2010	EXAMINER	
SUGHRUE MION, PLLC			MAKI, STEVEN D	
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037			1791	
		NOTIFICATION DATE	DELIVERY MODE	
		07/12/2010	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,068	<b>Applicant(s)</b> OHSAWA ET AL.
	<b>Examiner</b> Steven D. Maki	<b>Art Unit</b> 1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 April 2010.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

Art Unit: 1791

- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "pneumatic tire which designates directions to an inner and outer side of a vehicle in a state where the tire is mounted on the vehicle" (emphasis added). One of ordinary skill in the art is not reasonably appraised of the scope of protection afforded by this language. It is uncertain if the "which designates directions" language relates to intended use or adds additional structure. If additional structure is intended, then the scope and meaning of such additional structure is ambiguous.

The 132 declaration by Saguchi filed 4-7-10 and applicant's arguments based thereon has been considered, but is not persuasive for establishing claim 1 as being definite. Saguchi describes "designed and adapted". It is uncertain which design(s) and adaptation(s) are excluded by the above language of claim 1 and which design(s) and adaptation(s) are required by the above language of claim 1. Saguchi describes "structure" but fails to identify the structure. It continues to be unclear what additional structure is required by claim 1.

- 3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4) **Claims 1, 15, 20, 22-24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460).**

Japan 004 discloses a pneumatic tire with an asymmetric tread pattern comprising five land parts and four circumferential grooves 2, 3, 4, 5. The circumferential grooves are asymmetrically arranged as can be seen from Figure 1. The tread has an inside region 6, a center region 7 and an outside region 11. The tire has improved steering stability and resistance to non-uniform wear. It is also possible to guarantee wet performance. See figure 1, abstract and translation. Figure 1 describes the widths of the circumferential grooves. The circumferential groove 2 has a width "GW2" of 11.0 mm. The circumferential groove 3 has a groove width "GW3" of 13.0 mm. The circumferential groove 4 has a groove width "GW4" of 9.0 mm. The circumferential groove 5 has a groove width "GW5" of 9.0 mm. Figure 1 also describes the widths of the transverse grooves. The transverse grooves in the inner shoulder block row (first land part) have a width of 6.0 mm. The transverse grooves in the outer shoulder block row (fifth land part) have a width of 7.0 mm. The width of the inside shoulder block row is illustrated as being smaller than the width of the outer shoulder block row. The transverse grooves separating the blocks in the second land part (i.e. the block row between circumferential grooves 2 and 3) are inclined at angle alpha of 10-50 degrees with respect to the axial direction Y-Y. See translation. Japan 004 teaches that the tire is a high performance tire having a size such as 225/50VR16 and teaches installing the tire on both sides of a vehicle such that region 6 is an inside

region (inner region) and region 11 is an outside region (outer region). The claimed lateral grooves read on the transverse grooves in the shoulder block rows. The claimed slant grooves read on the transverse grooves in the second land part. These transverse grooves ("slant grooves") are inclined at angle of 10-50 degrees with respect to the axial direction. The range of 10-50 degrees overlaps claimed range of not less than 45 degrees. Since the transverse grooves in the inner shoulder block row (first land part) have a width of 6.0 mm, the transverse grooves in the outer shoulder block row (fifth land part) have a width of 7.0 mm and the width of the inside shoulder block row is illustrated as being smaller than the width of the outer shoulder block row, there is sufficient evidence to conclude that the volume of grooves in the inner shoulder row is less than the volume of lateral grooves in the outer shoulder row. In any event: As to claims 1 and 29, it would have been obvious to one of ordinary skill in the art to provide the shoulders of Japan 004's tire such that the volume of lateral grooves in the inside shoulder block row is smaller than the volume of lateral grooves in the outside shoulder block row since (1) Japan 004 discloses that the transverse grooves in the inner shoulder block row (first land part) have a width of 6.0 mm, the transverse grooves in the outer shoulder block row (fifth land part) have a width of 7.0 mm and the width of the inside shoulder block row is illustrated as being smaller than the width of the outer shoulder block row and (2) Japan 004 teaches that the tire has excellent steering stability and biased abrasion resistance due to high speed cornering while maintaining wet performance.

As to claims 1 and 29, it would have been obvious to one of ordinary skill in the art to provide the shoulder land part row of the axially inner side of Japan 004's tire such that it comprises a rib since Boiocchi et al, which like Japan 004 teaches an asymmetric tire tread pattern, suggests joining shoulder blocks using a continuous track ("rib") to reduce saw tooth wear.

Applicant argues that modifying the tire in Japan 004 to include a rib would destroy the functionality of the tire. Applicant argues that Japan 004 explicitly teaches away from a rib being disposed in the shoulder land part of the axially inner side and directs attention to page 6 lines 14-22 of the translation of Japan 004. Applicant is incorrect. Providing Japan 004's shoulder land part row of the axially inner side such that it comprises a rib fails to preclude oblique grooves. It is emphasized that Boiocchi et al teaches a shoulder land part row comprising both a continuous track (rib) and transverse grooves 23 (oblique grooves). As to page 6 lines 14-22 of the translation of Japan 004, examiner cannot find the "explicit" basis argued by applicant. Which line on page 6 lines 14-22 contains the explicit word "rib"? Contrary to applicant's arguments, page 6 lines 14-22 discusses oblique grooves but fails to "explicitly" mention a "rib". Furthermore, "... our case law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention." In re Fulton 73 USPQ2d 1141, 1145 (Fed. Cir. 2004).

Applicant argues that Japan 004 touts the benefits of having oblique grooves 8 which open to the tread end. In response, examiner comments that providing Japan

Art Unit: 1791

004's shoulder land part row of the axially inner side such that it comprises a rib is consistent with oblique grooves which open to the tread end. See Figure 2 of Boiocchi et al.

Applicant's arguments regarding the function of the rib at pages 15 and 16 of the response filed 4-7-10 are not commensurate in scope with the claims and are therefore not persuasive since none of the claims require a rib 7 as shown in Figure 1 of applicant's disclosure.

With respect to groove depth (claim 29), it would have been obvious to one of ordinary skill in the art to provide Japan 004's lateral grooves such that the depth of the slant grooves is deepened from the side of the equatorial line toward the side of the tread end of the slant groove since (1) Verdier suggests increasing the depth of transverse grooves from the center of a tread toward the edges to promote water drainage (col. 2 lines 26-31) and/or (2) Boiocchi et al's suggestion to increase depth of transverse grooves 71 in second land parts from the EP side toward the tread edge side to prevent unbalanced distribution of tread compound.

No unexpected results over Japan 004 have been shown.

As to claim 15, note the circumferential grooves of the asymmetric tread disclosed by Japan 004.

As to claim 20, Japan 004 teaches inclining the slant grooves at an angle alpha of 10-50 degrees with respect to the axial direction Y-Y.

As to claim 22, the claimed rigidity would have been obvious in view of Japan 004's disclosure to define land parts having similar widths using circumferential grooves

Art Unit: 1791

2, 3, 4 and 5. The description of the rigidity in the widthwise direction being "within a range of 50% from a large value between mutually adjacent land part rows" is sufficiently broad to read on the similar width land rows of Japan 004. The similar widths of the land rows result in similar rigidities for those land rows. As the width of a row increases, so does its rigidity in that direction. In other words, claim 22 reads and fails to define over land rows having the widths shown by Japan 004.

As to claims 23 and 24, the contact area on one side of Japan 004's tread is different than that on the other side.

5) **Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of Takasugi et al (US 5,358021).**

As to claim 2, it would have been obvious to use a pair of ribs as third and fourth land parts instead of a rib (third land part) and a block row (fourth land part) in Japan 004's asymmetrical tread in view of Takasugi et al's suggestion to use a pair of ribs 5, 4 as third and fourth land parts in an asymmetric tread of a tire having excellent maneuvering stability.

6) **Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Verdier (US 3,584,670) and/or Boiocchi et al (US 2002/0139460) as applied above and further in view of Japan 408 (JP 03-186408) and Takigawa et al (US 4,214,618).**

As to claims 3 and 5, it would have been obvious to one of ordinary skill in the art to form a fine circumferential groove in the shoulder of Japan 004's tire since Japan 408

and Takigawa et al suggest forming a fine circumferential groove in a shoulder of the tread of a tire to prevent wear. With respect to lateral grooves in the shoulder land portion being at no more than 15 degrees with respect to the widthwise direction (claim 3), the lateral grooves in the shoulder rows of Japan 004's tread are oriented generally perpendicular to the circumferential direction as shown in the figures. With respect to claim 5, see Figures 5 and 6 of Takigawa et al.

7) **Claims 4, 6, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Verdier (US 3,584,670) and/or Boiocchi et al (US 2002/0139460) and further in view of Japan 408 (JP 03-186408) and Takigawa et al (US 4,214,618) as applied above and further in view of Japan 511 (JP 2002-225511) and Japan 107 (JP 62-059107).**

As to claims 4, 6 and 7, it would have been obvious to one of ordinary skill in the art to form the claimed holes in the shoulder of Japan 004's tread since Japan 511 and Japan 107 suggest forming holes in the shoulders of a tire tread to reduce wear. With respect to claim 4, both Japan 511 and Japan 107 teach disposing holes at a location axially inward of the location of the narrow groove suggested by Japan 408 and Takigawa et al. With respect to claim 6, Japan 107 suggests using smaller holes near the circumferential groove. With respect to claim 7, both Japan 408 and Takigawa et al teach disposing holes in a ground contacting surface of the tire. The description regarding camber (camber at an angle of -.5 degrees being an intended use feature) fails to require holes closer to the circumferential groove than that suggested by Japan

511 and Japan 107. With respect to claim 8, see Figure 1 of Japan 408. It is noted that claim 8 is dependent on claim 4.

Applicant comments that the examiner does not explicitly indicate which of the applied references disclose the rib recited in claim 4. The answer is Japan 408. As can be seen from a cursory review of Figures 1 and 2 of Japan 408, the rib is the tread structure, which is axially outside the fine groove 4 and has a width within distance Wn. Applicant appears to be confusing a continuous circumferential rib (not claimed) with the claimed "rib" which reads on a short rib axially outside of a fine groove 4.

8) **Claims 9-12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) and further in view of Japan 408 (JP 03-186408) and Takigawa et al (US 4,214,618) as applied above and further in view of Europe 104 (EP 810104) and Emerson (US 5,421,387) and Adam et al (US 5,211,781).**

As to claims 9-12 and 26, it would have been obvious to one of ordinary skill in the art to form both end opening widthwise fine grooves inclined at an angle with respect to the circumferential direction in Japan 004's rib since (1) Europe 014 teaches forming sipes in a tread to improve grip, (2) Emerson shows forming "sipes" in ribs of an asymmetrical tread pattern and (3) it is well known / conventional in the tread art to illustrate sipes as lines because they are narrow as evidenced by Adam et al. Hence, Europe 104 and Emerson suggests forming sipes in the rib (including the biased center rib) to obtain the predicted result of improved grip. With respect to claim 10, Europe 104 teaches curving the sipe in the depth direction.

- 9) **Claims 13, 14 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of German 159 (DE 3738159).**

As to claims 13, 14 and 28, it would have been obvious to form the claimed ellipsoidal recesses in Japan 004's tread since German 159 suggest forming ellipsoidal sipes 9 in shoulder ribs and a center rib of a tread to provide uniform wear and obtain good grip.

As to claim 28, the subject matter therein would have been obvious since German 159 teaches orienting the ellipsoidal sipes in shoulders such that the major axes are alternately opposed in the circumferential direction. See figure 3. Figure 3 clearly illustrates ellipsoidal sipes 9 in each of the shoulder ribs and center rib and Figure 3 clearly shows alternatingly inclined ellipsoidal recesses.

- 10) **Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of Europe 405 (EP 1,074,405).**

As to claims 16 and 17, it would have been obvious to provide Japan 004's blocks with the claimed height since Europe 405 suggests forming a peripheral protuberant portion on a block of a tire tread to prevent ununiformity of ground contact pressure and thereby improve uneven wear resistance.

- 11) **Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of Takashi (WO 02/102611) or Japan 321 (JP 11-334321).**

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

As to claim 17, it would have been obvious to provide Japan 004's blocks with the claimed height since (1) Takahashi teaches providing blocks of a tire tread with varying height at leading and trailing edges to reduce noise or (2) Japan 321's suggestion to provide blocks of a tire tread with varying height at leading and trailing edges to enhance stability (machine translation). US 2005/0072505 is an English language equivalent to WO 02/102611.

**12) Claims 18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of Europe 101 (EP 849101).**

As to claims 18 and 27, it would have been obvious to provide Japan 004's blocks with the claimed decreasing height in an acute angle corner portion since Europe 101 teaches chamfering the acute angle corners of blocks of a tire tread to improve resistance to uneven wear.

**13) Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of Canada 627 (CA 2,083,627).**

As to claim 19, it would have been obvious to add projections as claimed in Japan 004's circumferential grooves since Canada 627 teaches disposing projections in

Art Unit: 1791

circumferential grooves of a tire tread to improve transmission of tractive and braking forces.

- 14) **Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of Japan 406 (JP 56-131406).**

As to claim 21, it would have been obvious to one of ordinary skill in the art to provide Japan 004's lateral grooves such that the directions of the lateral grooves are alternately rendered in opposite directions since it is taken as well known / conventional per se in the tire art to use of alternating direction lateral grooves to improve slip resistance (traction) as evidenced by Japan 406.

- 15) **Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Boiocchi et al (US 2002/0139460) as applied above and further in view of Japan 915 (JP 2002-192915).**

As to claim 25, it would have been obvious to use the claimed rim and disc to mount Japan 004's tire since Japan 915 shows using a rim and disc (Figure 1) in order to mount a tire.

#### Remarks

- 16) Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 4-7-10 have been fully considered but they are not persuasive. Applicant's arguments are addressed above.

- 17) No claim is allowed.

- 18) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

- 19) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/  
Primary Examiner, Art Unit 1791

Steven D. Maki  
July 6, 2010